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In the claims:

Please cancel claims 1-13 without prejudice to pursue the subject matter in a future application.

14. (New) A diagnostic kit for MR-associated syndromes to work a method for the determination of the enzymatic activity of FA4L4 protein in a biologic sample, comprising:
- a) collecting a biological sample from the subject,
  - b) incubating the sample in an appropriate reaction mixture containing arachidonic acid and
  - c) detecting arachidonyl-CoA production; which comprises:
    - a) Lysis buffer
    - b) Coenzyme agent A and Adenosine 5'triphosphate (ATP) and
    - c) Cold arachidonic acid and arachidonic acid.
15. (New) The diagnostic kit according to claim 14, further comprising appropriate protease inhibitors and/or reduction agents.
16. (New) The diagnostic kit according to claim 14, wherein the biological sample contains biological fluids, lysed lymphoblastoid cells and leukocytes.
17. (New) The diagnostic kit according to claim 15, further comprising a labeled arachidonic acid.
18. (New) The diagnostic kit according to claim 16, wherein the labelled arachidonic acid is a <sup>14</sup>C-labeled arachidonic acid.